

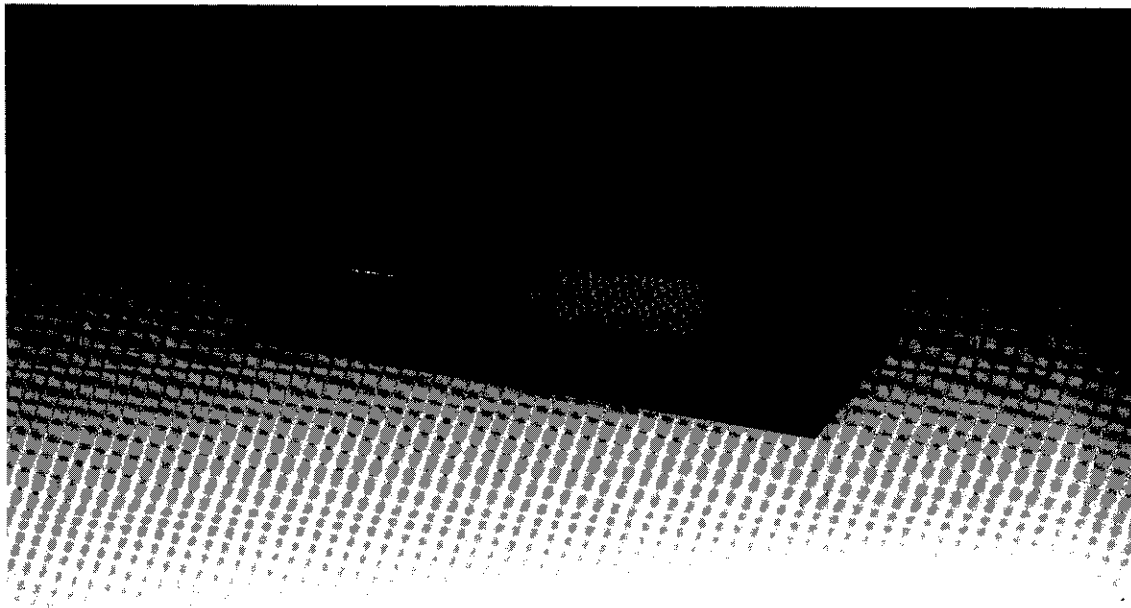
Operating Instructions



HQ

Video Cassette Recorder

NV-G25 Series



National

Before attempting to connect, operate or adjust this product, please read these instructions completely.

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IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

**TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THIS EQUIPMENT TO
RAIN OR MOISTURE.**

NV-G25A: Australian model

NV-G25EA: New Zealand model

FOR YOUR SAFETY

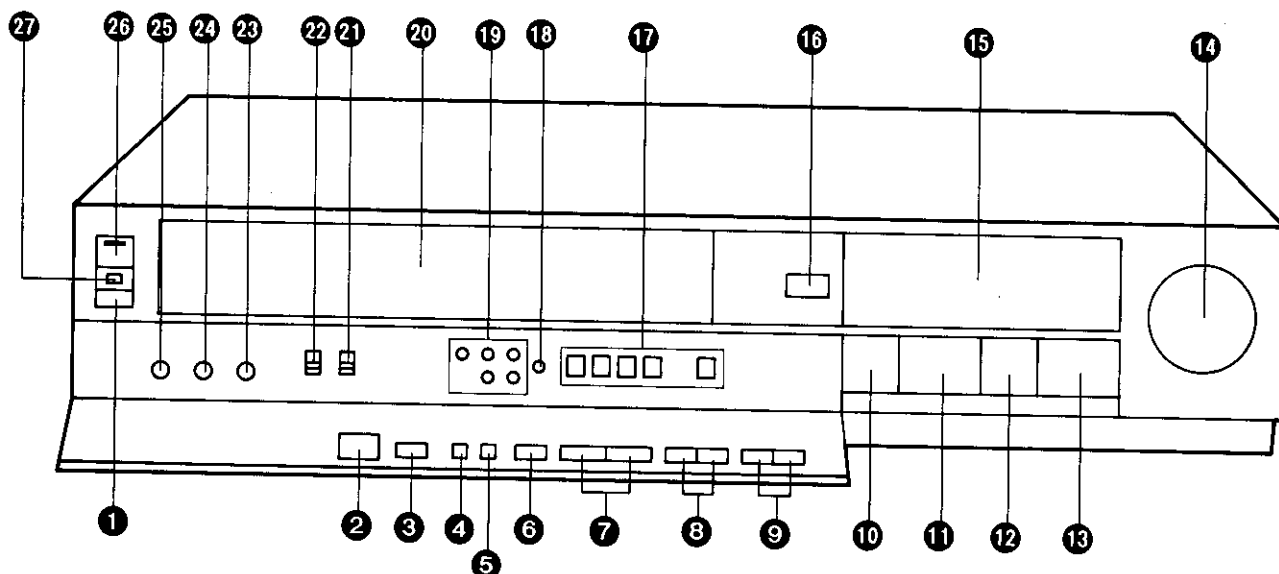
■ DO NOT REMOVE OUTER COVER.

To prevent electric shock, do not remove cover.
No user serviceable parts inside. Refer servicing
to qualified service personnel.

is the safety information.

CONTROLS AND COMPONENTS

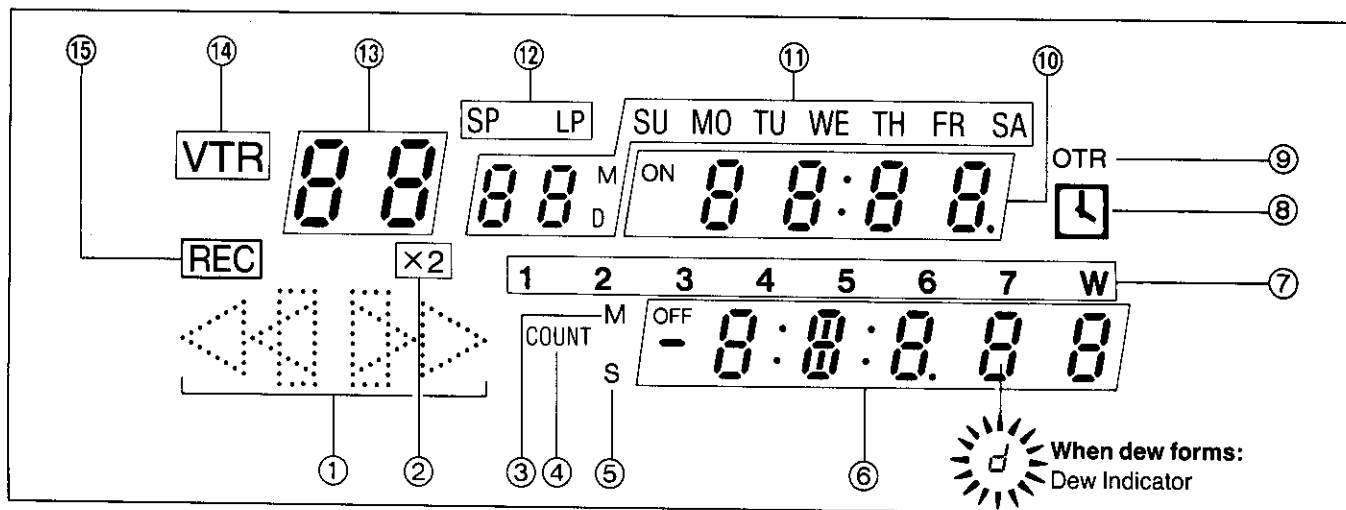
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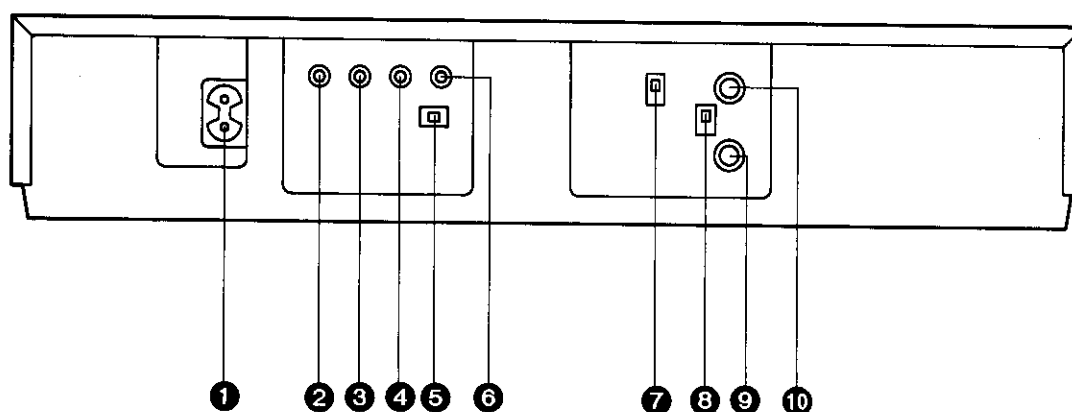
Multi Function Display



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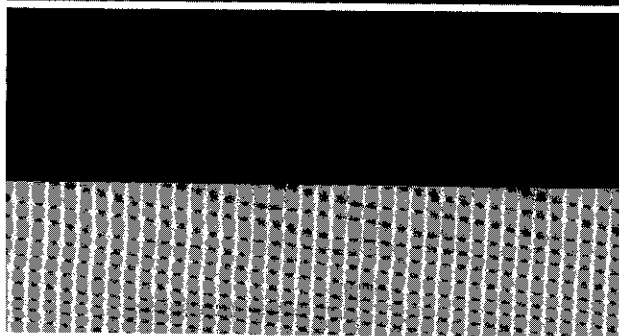
REAR



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FEATURES



Slim Design and Front Loading System

This highly functional design allows loading the video cassette from the front, thus minimizing the space required for the placement.

Multi-Function Display

Whenever an operation button is pressed, the activated function is immediately indicated on this easy-to-see display. It shows you at a glance, in what operation mode the VTR is functioning.

Programmable Remote Controller (Infra-red)

In addition to letting you control all major VTR functions, this handy Remote Controller also lets you programme timer recordings from the comfort of your armchair.

Picture Sharpness Control

With this control, the contours of the playback picture can be made sharper or softer.

Reception of up to 16 TV Stations

The built-in tuner in this video recorder allows pretuning of 16 TV stations. So this VTR can accommodate virtually any increase in available TV programmes in the future.

Super Still, Super Still Advance and Double Super Fine Slow Playback

Super Still, Super Still Advance and Double Super Fine Slow Playback are possible with superb picture quality free from noise and jitter (SP mode only).

Digital Scanner

This Digital Scanner lets you programme timer recordings by tracing the corresponding bar codes on the supplied Programming Sheet and then transmitting the data to the VTR.

Search Dial

The Search Dial allows immediate switching between any of the playback functions of this VTR by simply turning this control.

8 hours recording and playback

The LP mode with a maximum recording and playback time of 8 hours on a NV-E240 video cassette gives you double savings in tape costs and storage space.

VHS Index Search System

With the Index Search function, up to 20 addresses (places where an Index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.

Intro Scan Function

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another.

Super OTR Function (One-Touch Timer Recording)

This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start or with start within 24 hours by precisely setting the starting time and ending time to the desired minute. When the recording ends, the VTR will automatically turn itself off.

Auto Operation

The extremely convenient Auto Operation functions of this VTR include Auto Start and Auto Play when a recorded cassette is inserted, Auto Eject which indicates that an inserted cassette is not suitable for recording, Power-Off Eject for ejecting a cassette even with the VTR off, and Auto Rewind at the end of a tape.

If the VTR On/Off switch is pressed during the rewind mode including Auto Rewind, the VTR will eject the cassette and turn itself off when rewinding is completed.

1-Month Calendar Timer

The clock/timer of the VTR is programmed with the calendar up to the end of 2001, so it knows exactly what day of the week it is on any given date. Programming of as many as 8 timer recordings is possible up to one month in advance.

HQ (High Quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

Lap Time Counter

The new Lap Time Counter is a great improvement over the approximate counter systems of conventional VTRs. It gives you an exact reading of the elapsed tape time in hours, minutes and seconds, and makes it easy to calculate the tape time left on a cassette.

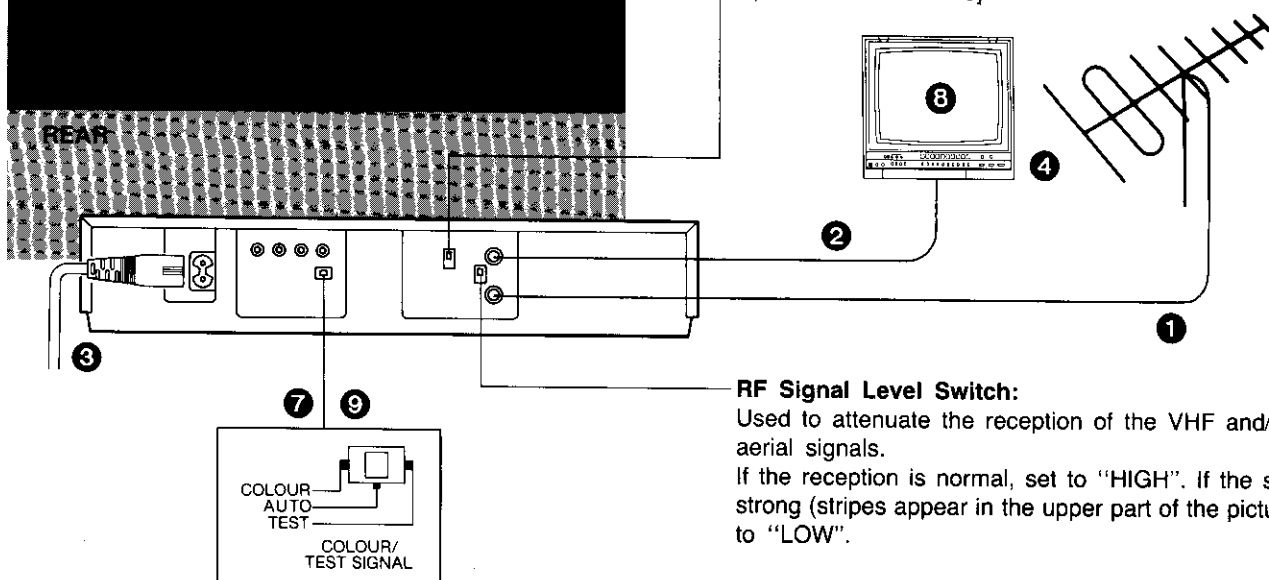
INSTALLATION, TUNING THE TV SET TO THE VIDEO PLAYBACK CHANNEL

NV-G25A: FOR YOUR SAFETY

Install any external aerial to AS 1417.1.

Video Playback Channel Selector [NV-G25A, EA]

This switch is used to select the Video Playback channel which is not occupied with any TV station. [NV-G25A: 0 or 1; NV-G25EA: 2 or 3].



RF Signal Level Switch:

Used to attenuate the reception of the VHF and/or UHF aerial signals.

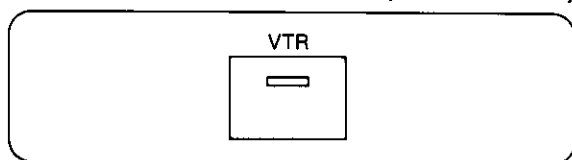
If the reception is normal, set to "HIGH". If the signal is strong (stripes appear in the upper part of the picture), set to "LOW".

Connection to a TV Set

- 1 Connect the external aerial to the RF Input Socket on the VTR.
- 2 Connect the aerial terminal on your TV set to the RF Output Socket on the VTR with the supplied DIN-DIN Coaxial Cable.
- 3 Connect the AC Mains Lead (Supplied) to the AC Mains Socket of the VTR, and a mains outlet.

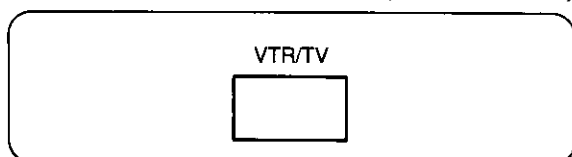
Video Playback Channel

- 4 Turn the TV set on.
- 5 Press the VTR On/Off Switch to turn the VTR On.
(FRONT PANEL)



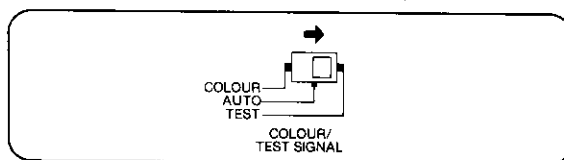
•The indicator will light up.

- 6 Set the VTR/TV Selector to "VTR".
(FRONT PANEL)



•VTR Indicator will appear in the Multi-Function Display.

- 7 Set the Colour Mode/Test Signal Switch to "TEST".
(REAR PANEL)



- 8 Tune the selected programme position (channel) of the TV set to the VHF channel shown below for your model. Confirm on the TV set that the received test pattern is as shown below.

NV-G25A VHF channel 0 or 1*
NV-G25EA VHF channel 2 or 3



NV-G25A only

*In some areas channel 0 may be used by local TV station. In this case switch to channel 1.

- 9 Set the Colour Mode/Test Signal Switch to "AUTO". Your TV is now ready to receive the RF output signal from the VTR.

- 10 To check.
Playback pre-recorded tape.

•If, during recording or playback, the colour is not satisfactory, it can be stabilized by setting Colour Mode/Test Signal Switch to COLOUR.

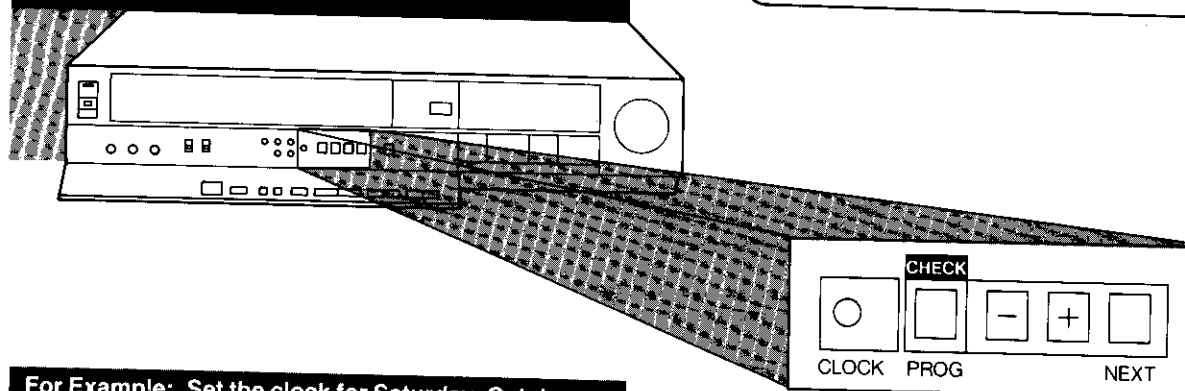
SETTING THE CLOCK TO THE PRESENT TIME

The built-in digital clock employs the 24-hour system.

- The timer back-up system maintains the clock operation for about 60 minutes in case of a power failure. However, it takes more than 60 minutes for the back-up circuit to become operational, after the VTR is connected to the mains.

Note:

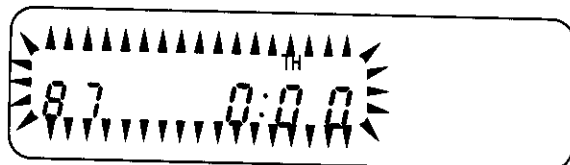
During date setting, the corresponding day is simultaneously set.



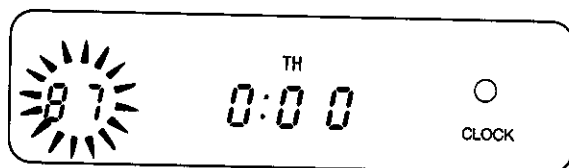
For Example: Set the clock for Saturday, October 8, 1988, 12:35.

- Connect the VTR to the mains outlet.
- Press the VTR On/Off Switch to turn the VTR On.

- 1 When connecting this VTR to the mains or after a long power failure, both the date and time indications flash.



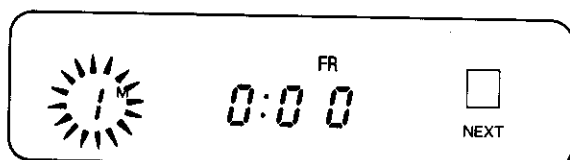
- 2 Press the Clock Button to start the date and time setting.



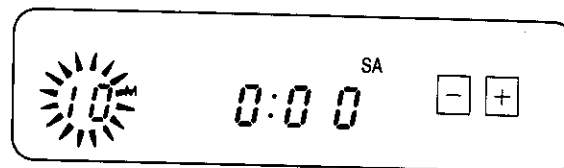
- 3 Press the (+) or (-) Button to set the year.



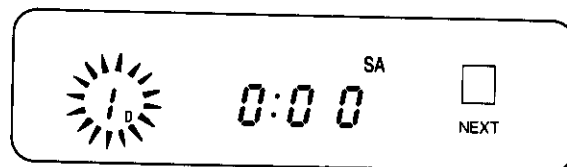
- 4 Press the Next Button.



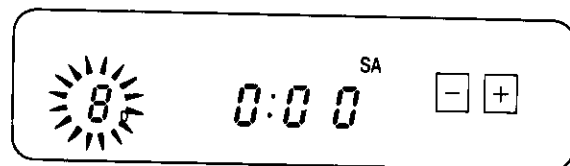
- 5 Press the (+) or (-) Button to set the month.



- 6 Press the Next Button.



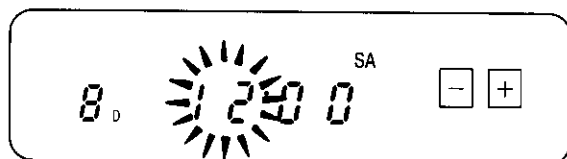
- 7 Press the (+) or (-) Button to set the date.



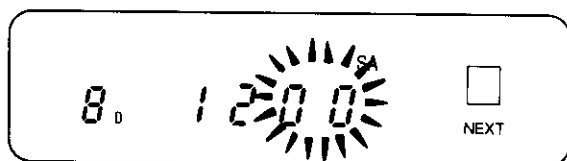
- 8 Press the Next Button.



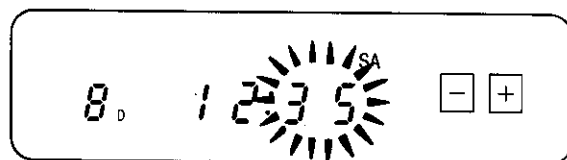
- 9 Press the (+) or (-) Button to set the hour.



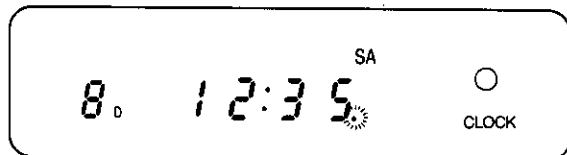
- 10 Press the Next Button.



- 11 Press the (+) or (-) Button to set the minute.



- 12 Press the Clock Button when the present time becomes exactly 12:35'00".



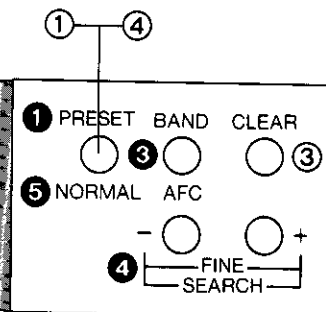
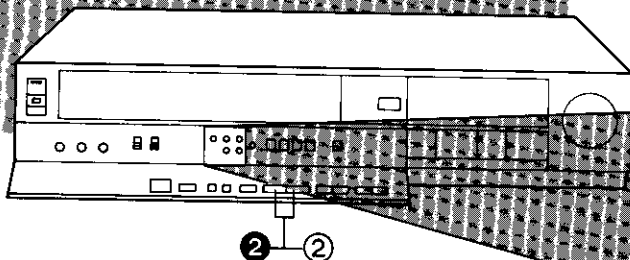
Button	Function
CLOCK	This Button is used to start and finish the time setting.
CHECK PROG	Unnecessary for Time setting
YEAR Mode	1987 → 1988 ... 2000 → 2001 1987 → 2001 ... 1989 → 1988
MONTH Mode	1 → 2 → 3 ... 10 → 11 → 12 1 → 12 → 11 ... 4 → 3 → 2
DATE Mode	JAN. MAR. MAY JUL. AUG. OCT. DEC. 1 → 2 → 3 ... 29 → 30 → 31 1 → 31 → 30 ... 4 → 3 → 2
	APR. JUN. SEP. NOV. 1 → 2 → 3 ... 29 → 30 1 → 30 → 29 ... 4 → 3 → 2
	FEB. 1 → 2 → 3 ... 27 → 28 or 29 1 → 29 or 28 → 27 ... 3 → 2
HOUR Mode	0 → 1 → 2 → 3 ... 21 → 22 → 23 0 → 23 → 22 ... 3 → 2 → 1
MINUTE Mode	00 → 01 → 02 ... 57 → 58 → 59 00 → 59 → 58 → 57 ... 02 → 01
NEXT	YEAR → MONTH → DATE → HOUR → MINUTE

SETTING THE TUNER IN THE VTR

The tuner in the VTR makes it possible to receive TV broadcasts and to record these programmes without having to turn on the TV set. The reception channels in the TV bands shown on the right can be received.

0-5	5A-11	21-69
1-3	4-11	21-69

The tuner in the VTR can be preset with up to 16 stations.

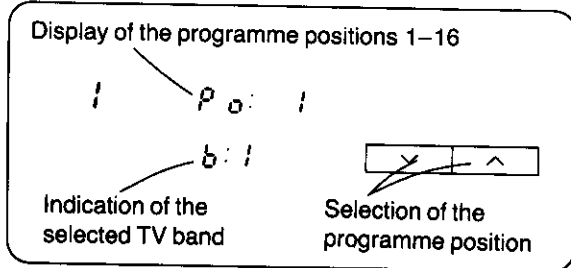


Preparation

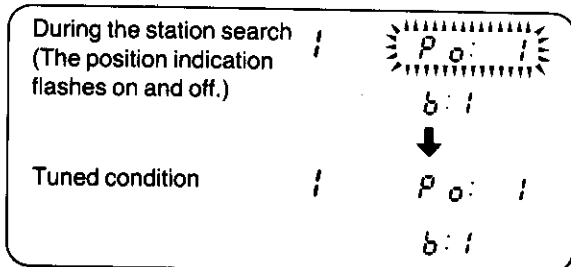
- Turn the TV set on and select the programme position (channel) which you have tuned to the video playback channel.
- Press the VTR On/Off Switch to turn the VTR on.
- Set the VTR/TV Selector to "VTR".

Tuning Procedure

- 1 Press the Preset/Normal Button.
The indication on the Multi-Function Display changes from the clock indication to the position indication.
- 2 Press the Channel Up or Down Button to select a programme position (channel) which you want to tune to a TV station.
- 3 Press the BAND/AFC Button to select the "I", "III", or "U" position.



- 4 Press the Search (+) or (-) Button.



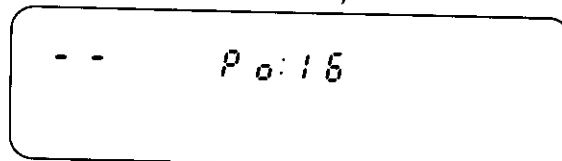
- When the tuning of the station is completed, the indication stops flashing and the tuned station is automatically memorized.
- At every push of the SEARCH (-) or (+) Button, the station will be tuned automatically.

Repeat steps 2-4 for each channel you want to tune to a station.

- 5 Press the Preset/Normal Button again.
The indication on the Multi-Function Display changes to the clock indication.

Blanking of Unoccupied Programme Positions

- 1 Press the Preset/Normal Button.
- 2 Press the Channel Up or Down Button to select a programme position (channel) which you do not want to tune to a TV station.
- 3 Press the Clear Button ("—" will be displayed in the Programme Position Indication).



- Repeat steps 2 and 3 for any programme positions on which no stations are to be tuned. Afterwards, these programme positions will be skipped during Up/Down selection of the programme position.
- To return a blanked station to the former (unblanked) condition, select the corresponding programme position on the VTR and press the CLEAR Button.

- 4 Press the Preset/Normal Button again.

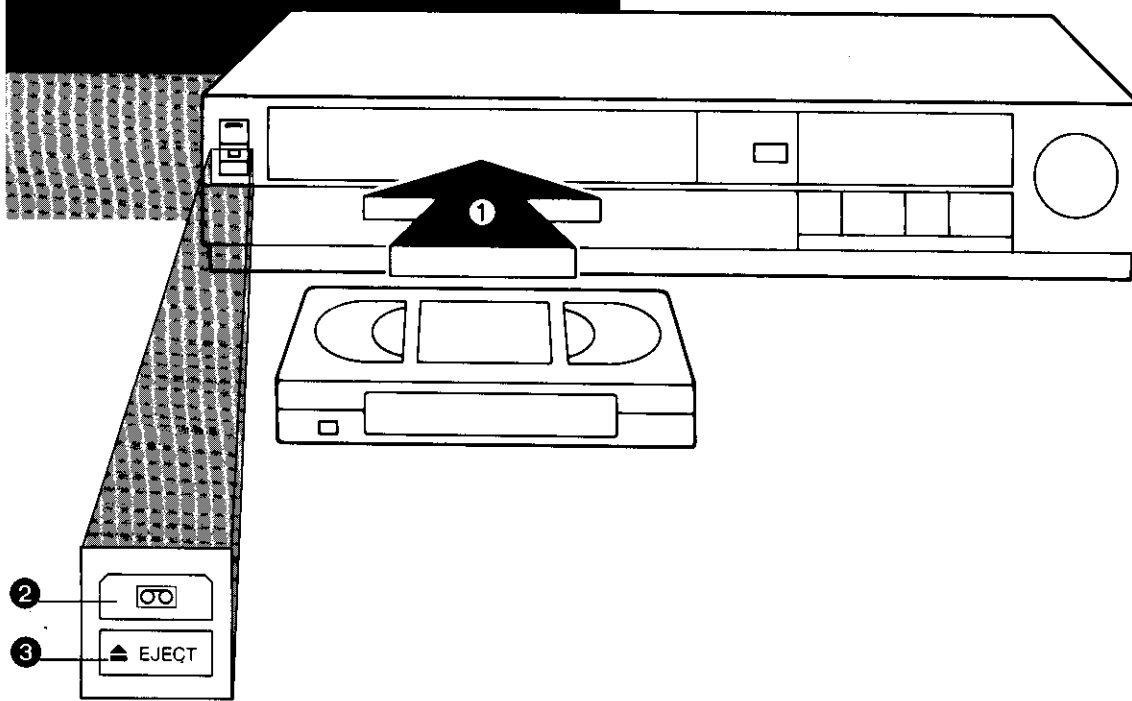
Fine Tuning Procedure

If fine tuning is necessary, for example for a weak station which is close to a strong station:

1. Make sure that the Preset/Normal Button is in the Off condition, i.e. the Multi-Function Display shows the present time.
2. Press the Fine Tuning "+" or "-" Button to obtain the best tuning condition.

- To return the tuning to its former state, press the BAND/AFC Button.

THE VIDEO CASSETTE



Inserting a Video Cassette (Auto Operation)

- 1 Insert the video cassette as shown. The VTR will be turned on automatically and the cassette will be automatically drawn into the VTR.
- 2 When a video cassette is inserted, the "VHS" mark will appear.

Notes:

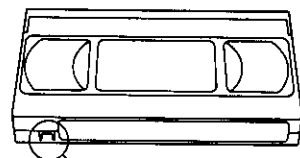
- When a video cassette with broken out erasure prevention tab (for example a pre-recorded tape) is inserted, playback will start immediately.

- Use **VHS** video cassette tapes only.

Removing a Video Cassette

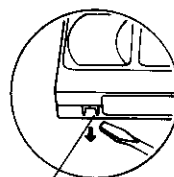
- 3 Press the Eject Button (▲).

Even if the VTR is off, the VTR automatically turns itself on when the Eject Button is pressed, and the cassette tape is ejected. After that, the VTR will turn itself off again.



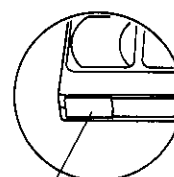
Erasure Prevention Tab

To prevent accidental erasure



Break off the tab with a screwdriver.

To record again

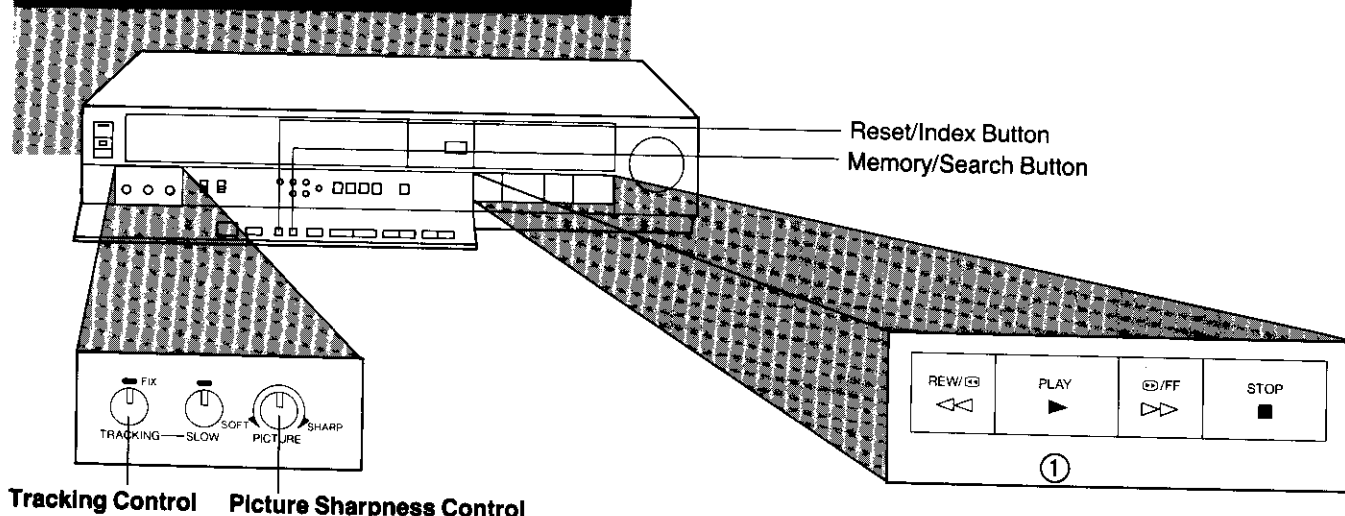


Cover the hole with adhesive tape.

PLAYBACK

Preparation

- Make sure that the Timer Record Button is set to "Off".
 - Insert a recorded video cassette.
- When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Turn the TV set on and select the video playback channel.
 - Make sure that Edit Switch is set to "Off".



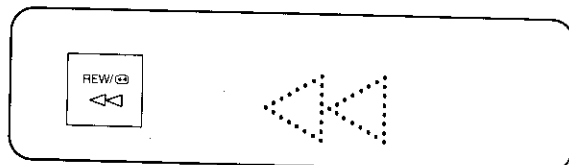
Tracking Control Picture Sharpness Control

Auto Operation

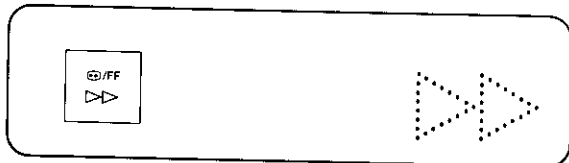
When inserting a video cassette which has the erasure prevention tab removed playback will start automatically.

Rewind and Fast Forward

Press the Rewind ◀◀/Review ◀◀ Button to rewind the tape.

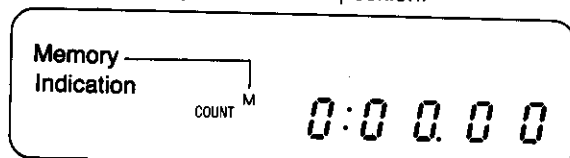


Press the Fast Forward ▶▶/Cue ▶▶ Button to wind the tape forward rapidly.



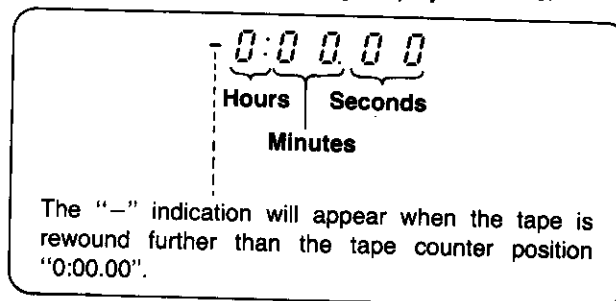
Memory Function

The Memory function makes it simple and fast to find a certain position on the tape later again, simply by pressing the Reset/Index Button at that position to set the tape counter to "0:00.00" and by pressing the Memory/Search Button. During Rewind or Fast Forward, the tape will then stop at approximately the desired position.



Lap Time Counter

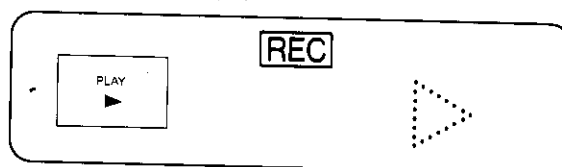
It shows the elapsed recording or playback time.



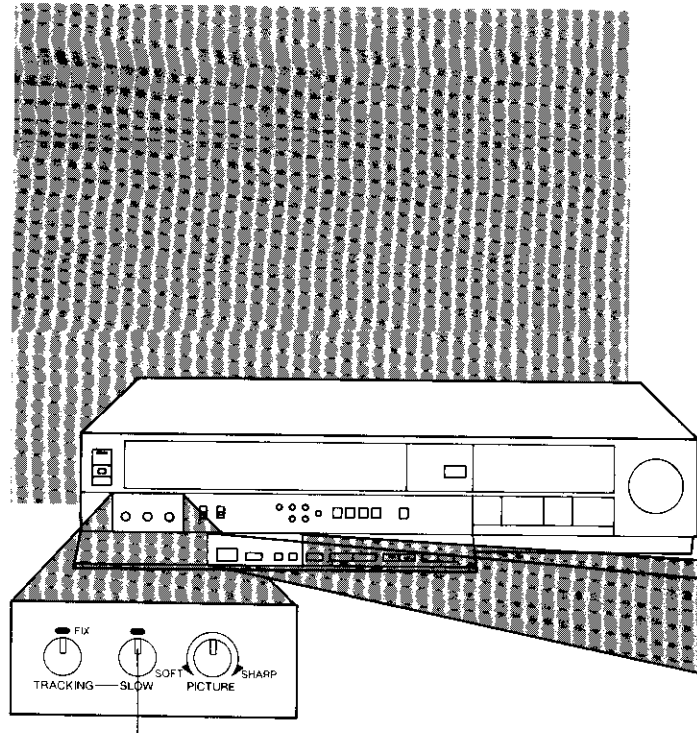
If the figures on the Tape Counter do not change during Fast Forward, Rewind or any of the playback functions, this means that nothing is recorded on that tape section. The Tape Counter is automatically reset to "0:00.00" when the video cassette is ejected.

1 Normal Playback

Press the Play Button (▶).



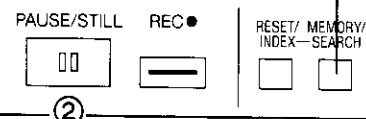
- Adjust the Tracking Control on the VTR if the image is partially obscured by bands of noise.
- Control the picture as you like with the Picture Sharpness Control (sharp or soft contours).



Slow Tracking Control

Memory/Search Button

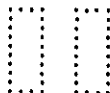
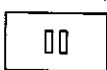
Repeatedly pressing this button will change the indication in the following order: "M" (Memory) → "S" (Search) → both indications are off → "M"...



2 Super Still Playback

When the VTR is in the playback mode, press the Pause/Still Button (II) to view a still-picture. To continue the normal playback, press this button again.

PAUSE/STILL



3 Double Speed Playback

When the VTR is in the playback mode, press the Double Speed Playback Button on the Infra-red Remote Controller to view a double speed playback picture. To continue the normal playback, press the Play Button.

×2



- If noise bars appear, they can be reduced by turning the Tracking Control.
- If the tape was recorded in the LP mode, no picture will be reproduced in the Double Speed Playback mode.

4 Super Still Advance Playback (Remote Controller only)

Press the Still Advance Button (II) of the Remote Controller unit while the VTR is in the still playback mode. Each time you press this button, the still-picture will advance one single field.

5 Double Super Fine Slow Playback

During normal playback, the Slow-motion playback can be activated by pressing the Slow Button of the Remote Controller unit. Slow-motion playback between $\frac{1}{25}$ and $\frac{1}{5}$ of the normal speed can then be obtained by using the Slow (+) or (-) Button.

- Press the Play Button (▶) to continue the normal playback.
- If the Slow playback operation continues for more than 5 minutes, the VTR automatically switches over to the stop mode.
- While playing back a tape in the Super Still or Double Super Fine Slow playback mode on a TV set equipped with an automatic vertical hold control, the picture may shake vertically. In this case, set the TV set's vertical hold (AUTO/MANUAL) selector to the "MANUAL" position, and adjust the vertical hold control.

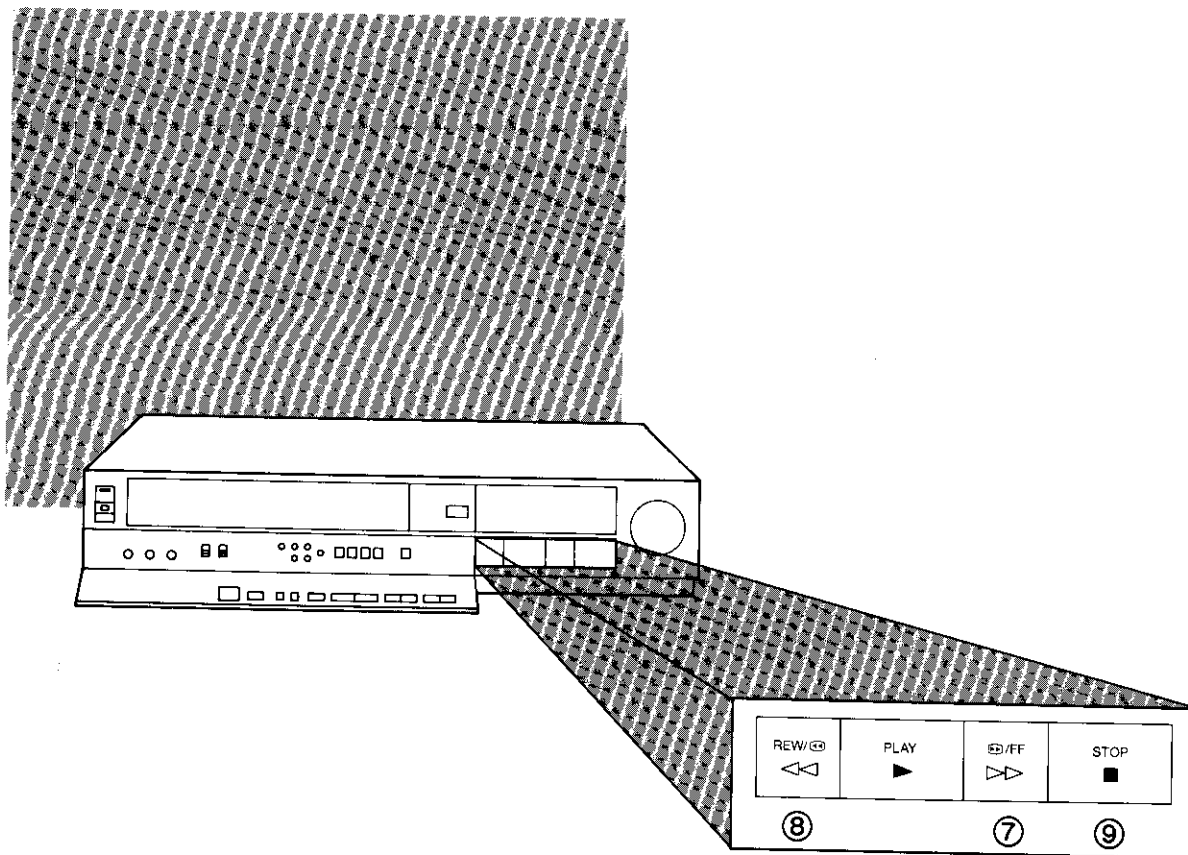
Slow Tracking Control

- When noise bars appear during Super Still, Super Still Advance or Double Super Fine Slow playback, switch over to slow playback and adjust the Slow Tracking Control to reduce the noise bars.
- It may not be possible to eliminate the noise bars completely.

6 Reverse Playback

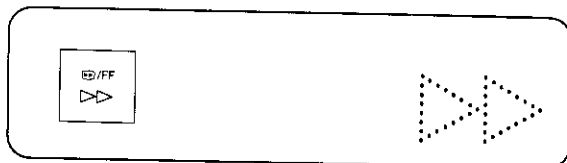
When the VTR is in the playback mode, switching over to Reverse Playback is possible by pressing the Reverse Playback Button on the Remote Controller.

- During Reverse Playback, noise bars may appear in the upper and lower parts of the picture.
- In the LP mode, the picture may roll vertically or be in black and white.



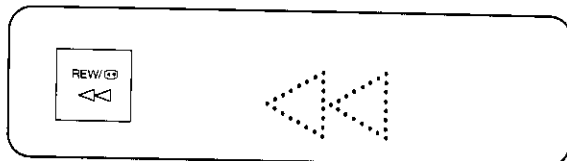
7 Cue Playback

When the Fast Forward ►►/Cue ⏭ Button is kept pressed while the VTR is in the playback mode, the tape will be played back in forward direction at about 7 times (SP mode) or 9 times (LP mode) normal playback speed.



8 Review Playback

When the Rewind ◀◀/Review ⏮ Button is kept pressed while the VTR is in the playback mode, the tape will be played back in reverse direction at about 7 times (SP mode) or 9 times (LP mode) normal playback speed.



To make possible Cue or Review playback without having to keep the respective button pressed, first press the Memory/Search Button so that the Search Indicator "S" appears in the Multi-Function Display, and then press the Fast Forward ►►/Cue ⏭ Button or the Rewind ◀◀/Review ⏮ Button.

To switch the VTR back to normal playback, press the Play Button (▶).

•When Cue or Review playback continues for more than 10 minutes, the VTR will automatically switch back to the normal playback mode.

9 To Finish Playback

Press the Stop Button (■) to stop the playback.



•In "LP" mode only:

1. During any playback mode other than normal playback, the picture may have some noise bars, the colour may be unstable, or a black and white picture may appear.
2. When playing back a tape which was recorded on another VTR, it may be necessary to adjust the Tracking control. In some cases the picture quality may still be inferior. This is due to limitation of format.

•The sound will be played back only during normal playback.

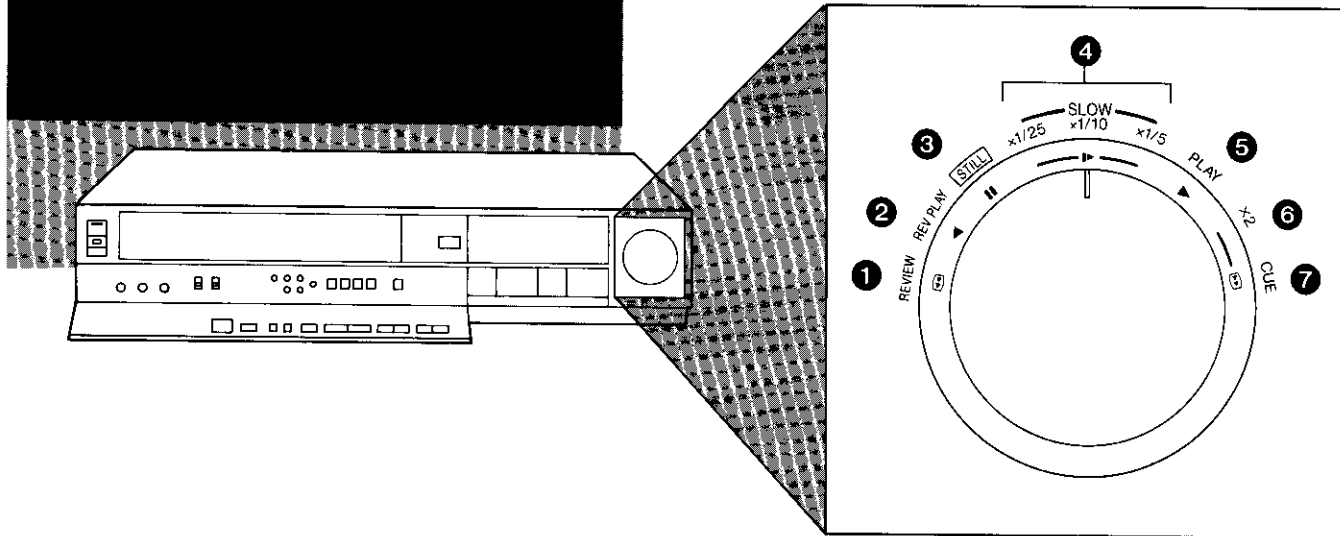
•If you leave the VTR in the still playback mode for more than 5 minutes, the VTR will automatically switch over to the Stop mode to protect the tape and the video heads.

•Noise which takes the form of horizontal bars appears on the TV in the Cue and Review playback modes. This is not an indication of a malfunction.

•The top of the picture may become distorted in the Cue, Review, Double Speed Playback, Reverse Play (LP), Still (LP) or Slow (LP) mode. This is not an indication of a malfunction.

•When the picture rolls vertically in the Cue or Review mode, adjust the vertical hold control on the TV set.

SEARCH DIAL



The Search Dial allows immediate switching between any of the playback functions of this VTR by simply turning this control.

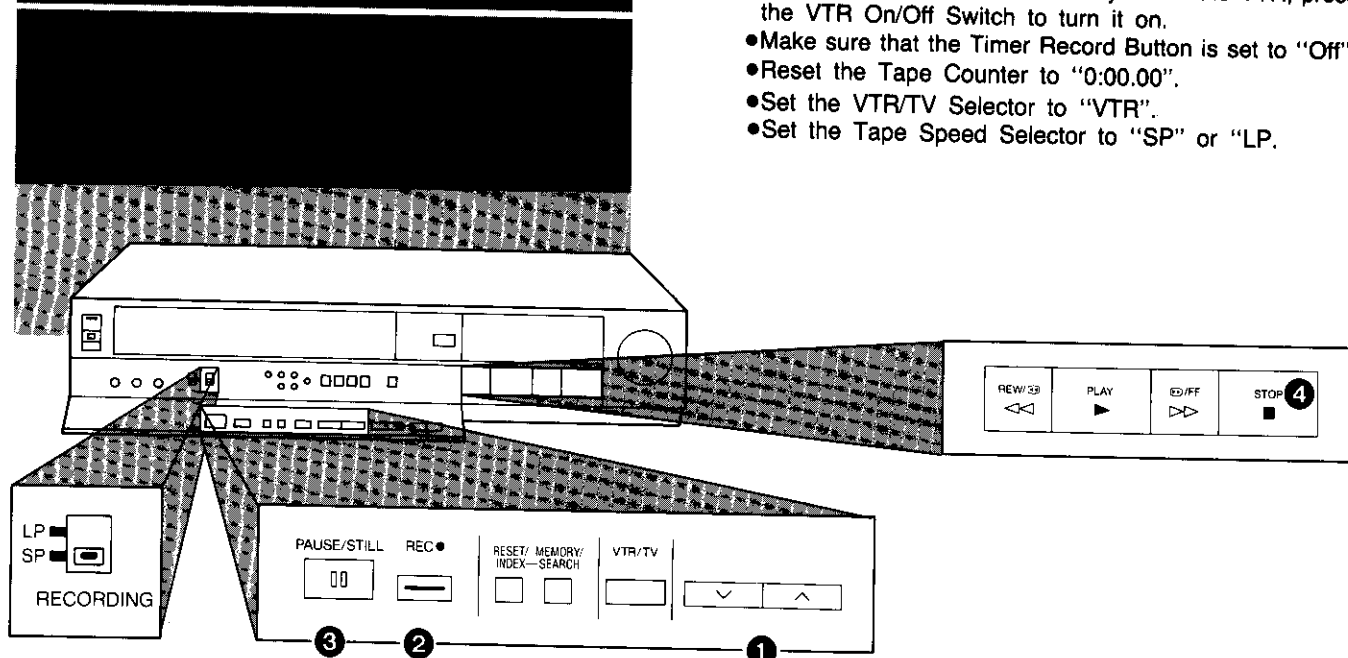
When the VTR is in the playback mode, it is possible to change over to the following playback modes by turning the Search Dial to the corresponding position:

- ① Review playback
- ② Reverse playback
- ③ Still playback
- ④ Slow-motion playback at any of 3 speeds:
1/25th, 1/10th, and 1/5th of normal playback speed
- ⑤ Normal playback
- ⑥ Double speed playback (SP mode only)
- ⑦ Cue playback

To return to normal playback, press the Play Button or set the Search Dial to "PLAY".

- When the slow-motion playback speed is changed with the Search Dial, the VTR will first change over to normal playback mode for an instant and then resume slow-motion playback at the preset speed.
- When the VTR is in the recording mode or the recording pause mode, the Search Dial does not function.
- When the VHS Index Search System is activated (during Cue or Review; "S" mark is lit), it is not possible to switch over to Reverse Playback.

RECORDING



Preparation

- Insert a video cassette with the erasure prevention tab intact.
- When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Make sure that the Timer Record Button is set to "Off".
- Reset the Tape Counter to "0:00.00".
- Set the VTR/TV Selector to "VTR".
- Set the Tape Speed Selector to "SP" or "LP".

Tape Speed Selector

For recording either of two tape speeds can be selected. During playback the recorder automatically selects the correct speed.

Select the desired tape speed with the Tape Speed Selector before recording.

- Set to the "SP" position for normal speed.
- Set to the "LP" position for slow speed.

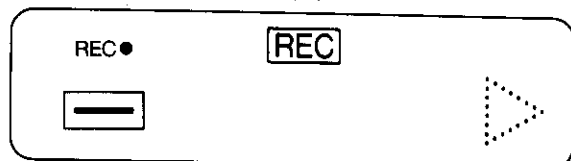
The corresponding indicator (SP or LP) lights up during recording and playback.

It is not recommended to change from the SP to the LP mode or vice versa in the middle of recording. Even if the switching is done while the VTR is in the pause mode, picture distortion will occur at the switching point during playback.

- 1 Select on the VTR, the programme position (channel) to be recorded. In order to confirm proper reception, turn on the TV set and select the video playback channel (AV).



- 2 Press the Record Button (●).

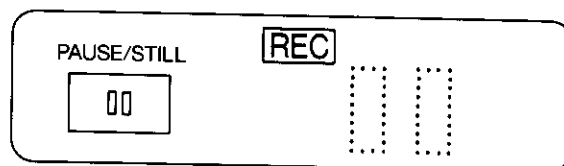


When a video cassette with broken out tab is inserted, it will be ejected automatically.

- During recording, the programme position (channel) on the VTR cannot be changed.

If You Wish to Avoid Recording Unwanted Material

- 3 Press the Pause/Still Button (||) to stop the tape temporarily.



- Press the Pause/Still Button (||) again to continue the recording.
- If you leave the VTR in the pause mode for more than 5 minutes, the VTR will automatically switch over to the stop mode to protect the tape and the video heads.

To Finish the Recording

- 4 Press the Stop Button (■).

Recording One TV Programme While Watching Another

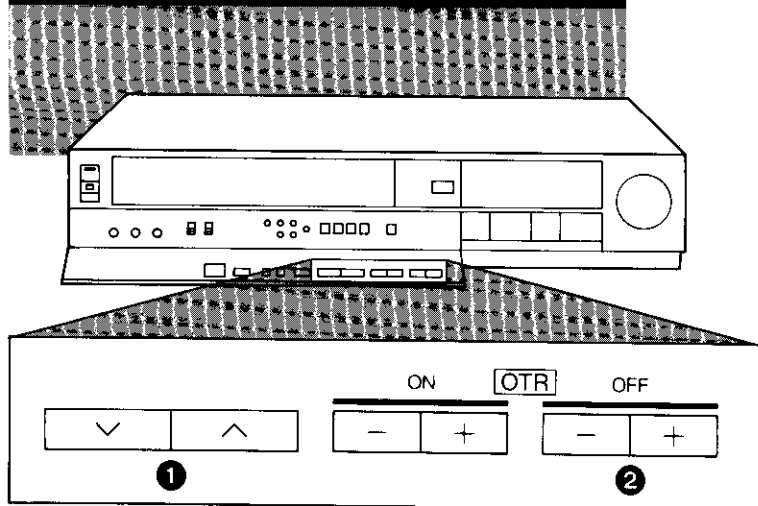
You can watch one programme on the TV while recording another on the VTR.

1. Record (following steps 1 and 2).
2. Set the VTR/TV Selector to "TV".
3. Select the desired programme position (channel) on your TV set.

- Disconnect all cables from the Video Input and Audio Input Sockets before starting the recording. If they remain connected, it is impossible to record TV programmes.

SUPER OTR FUNCTION (ONE-TOUCH TIMER RECORDING)

This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start or with start within 24 hours by precisely setting the starting time and ending time to the desired minute, and the VTR will automatically turn itself off when the recording ends.

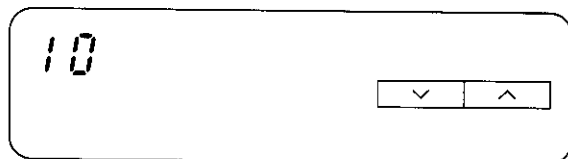


Preparation

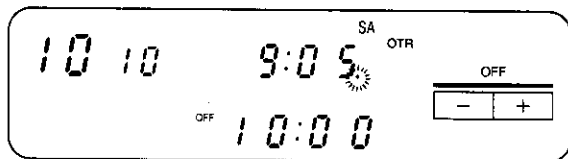
- Insert a video cassette with the erasure prevention tab intact.
- When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Make sure that the clock shows the present time correctly.
- Set the Tape Speed Selector to "SP" or "LP".
- Set the VTR/TV Selector to "VTR".

OTR Function with Immediate Start

- 1 Select the programme position (channel) to be recorded.



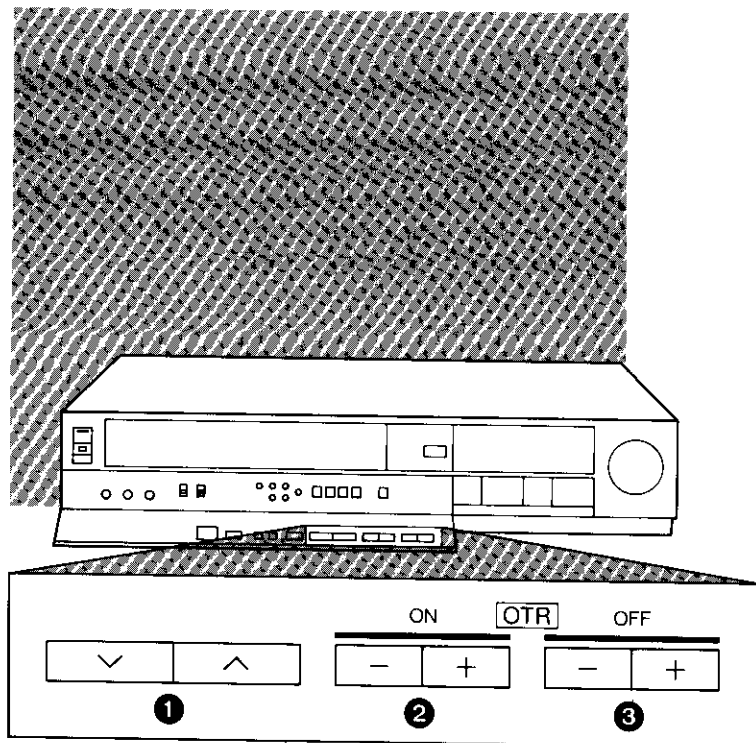
- 2 Set the desired ending time of the OTR by pressing OTR Off (+) or (-) Button. (For example, the present time is 9:05, and the ending time of the TV programme is 10:00.)



When the tab of the inserted video cassette is broken out, it will be ejected automatically.

- The "OTR" indicator will be displayed.
- The VTR will automatically switch off, when the OTR is completed. To turn the VTR on again, press the VTR On/Off Switch.

- When the tape reaches its end during an OTR the VTR will turn itself off.
- Disconnect all cables from the Video Input and Audio Input Sockets before starting the recording. If they remain connected, it is impossible to record TV programmes.



OTR Function with Delayed Start

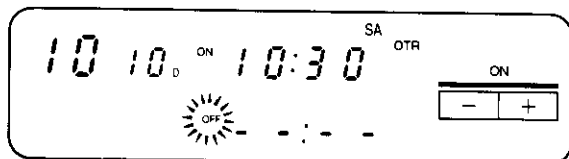
It is possible to programme an OTR recording for a TV programme which will start immediately or within the next 24 hours.

(For example, OTR recording of a TV programme broadcast from 10:30 to 11:00.)

- 1 Select the programme position (channel) to be recorded.

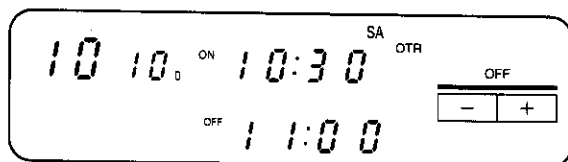


- 2 Press the OTR On (+) or (-) Button to set the OTR starting time to 10:30.



- The "OTR" Indicator will be displayed.

- 3 Press the OTR Off (+) or (-) Button to set the OTR ending time to 11:00.



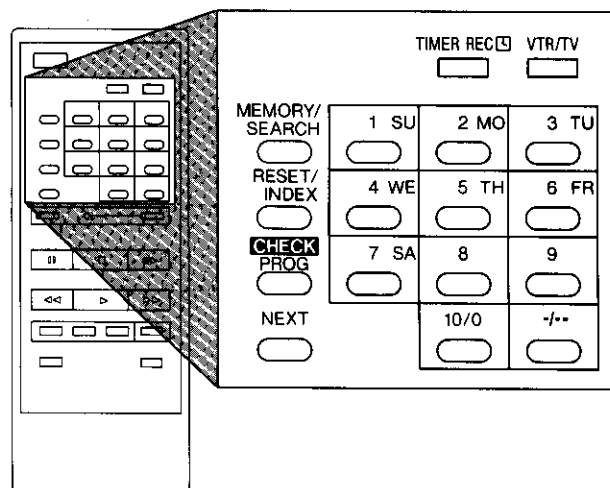
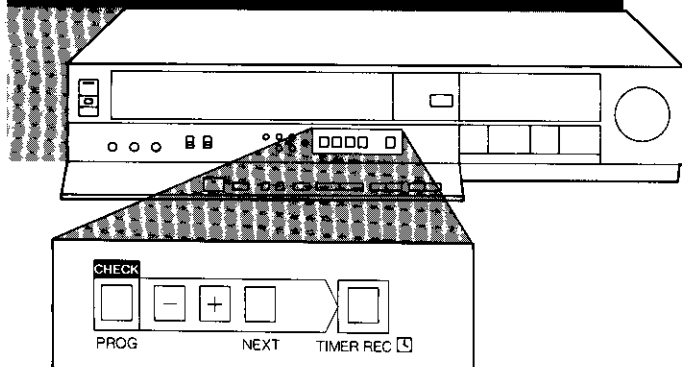
- After setting the OTR starting time step ②, the OTR Off (+) or (-) Button must be pressed within 8 seconds to select the OTR ending time, otherwise the selected starting time will be cancelled.

- The VTR will automatically switch off, when the OTR is completed. To turn the VTR on again, press the VTR On/Off Switch.

- Make sure that the OTR Function (One-Touch Timer Recording) does not overlap a programmed timer recording. An OTR always takes precedence over a timer recording.
- If you want to confirm the present time or the tape counter position before the programmed OTR is performed, or to check the tape counter position during the OTR, press the Check/Programme Button. To return the display to the previous indication, press this button once more.
- It is possible to change the OTR starting time or the ending time until the recording starts.
- It is possible to perform any VTR operation (except timer recording) until the recording starts.
- It is possible to change the OTR ending time even during the recording.
- To interrupt an OTR, press the VTR On/Off Switch to turn the VTR off.
- When quickly and repeatedly pressing the OTR On (+) or (-) Button or the OTR Off (+) or (-) Button, the corresponding time indication changes in 1-minute steps. When it is kept pressed, the indication changes in 10-minute steps.

TIMER RECORDING

The programming of timer recordings is possible both on the VTR itself and via the remote control unit.



Preparation

- Make sure that the Timer Record Button is set to "Off".
- Insert a video cassette with the erasure prevention tab intact.
When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Make sure that the clock shows the present time correctly.
- Set the Tape Speed Selector to "SP" or "LP".

Programming of Timer Recordings with the Remote Controller

The Timer Recording Buttons (Check/Programme, Next, Timer record) of the Remote Controller have the same functions as the Check/Programme, Next, Timer Record Buttons on the VTR. Therefore, instead of using the (+) and (-) Buttons on the VTR, the Timer Recording & Programme Position Selector Buttons of the Remote Controller can be used to programme timer recordings.

How to Select the Programme Position (Channel)

select channel	press button
1-9	1 SU - 9
10	10/0
11-16	-/- → 1 SU → 2 MO
for example 12	

If more than 5 seconds pass between the first, second and third push, the channel will not be changed normally.

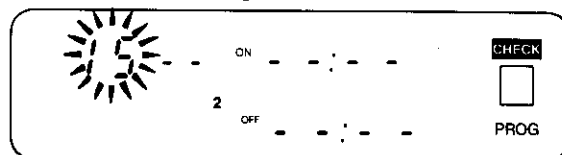
How to Set the Date and the Starting & Ending Times for Timer Recordings

The date and time can be set by directly pressing the number buttons (1 SU ~ 9). When two buttons have to be pressed (for example, when setting the date to a day of the month between 10 and 31, the hour between 10 and 23, the minute between 10 and 59), the second button must be pressed within 2 seconds after pressing the first button.

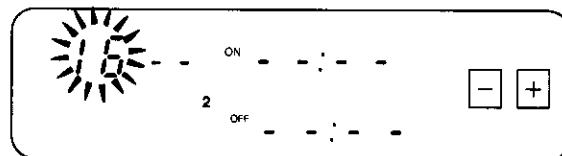
For Example:

Programming a timer recording for a TV programme that will be broadcast on Wednesday, October 26, from 20:00 to 22:45, on programme position (channel) 16, on timer programme number 2. (Present date=October 8, 1988)

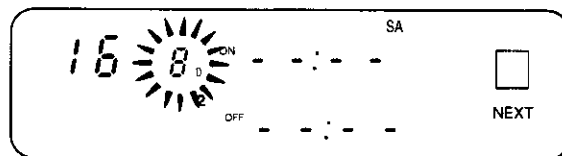
- 1 Press the Check/Programme Button to select the next unoccupied timer programme number.



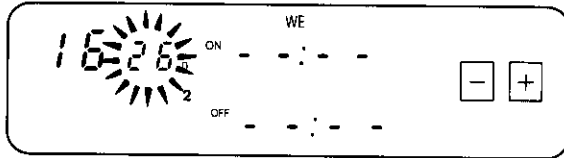
- 2 Press the (+) or (-) Button to select the programme position (channel) on which the TV programme will be broadcast.



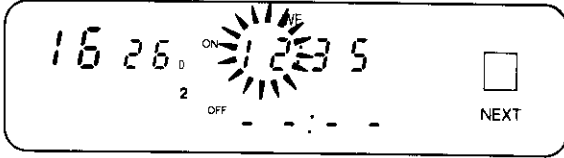
- 3 Press the Next Button.



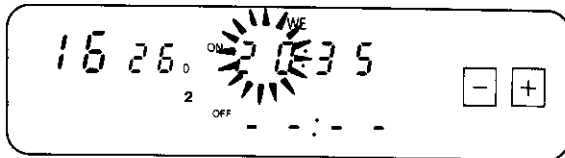
- 4 Press the (+) or (-) Button to set the date.



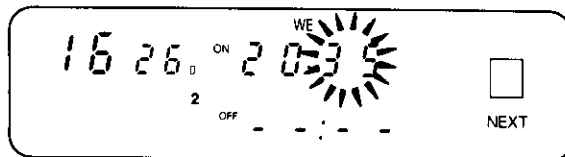
- 5 Press the Next Button.



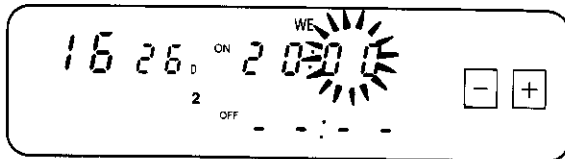
- 6 Press the (+) or (-) Button to select the hour of the starting time of the TV programme.



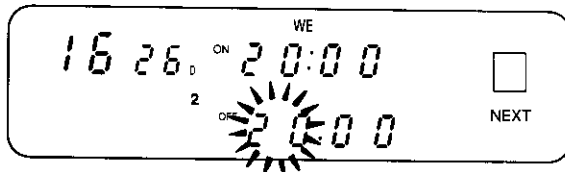
- 7 Press the Next Button.



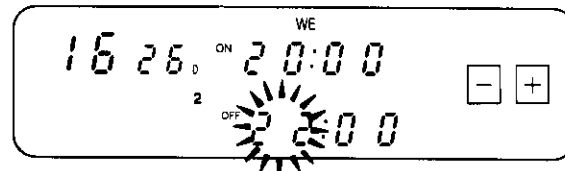
- 8 Press the (+) or (-) Button to select the minute of the starting time of the TV programme.



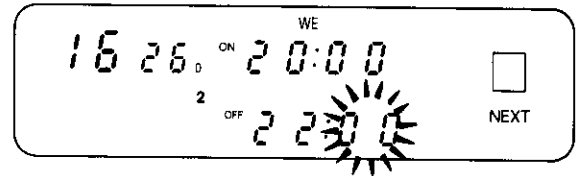
- 9 Press the Next Button.



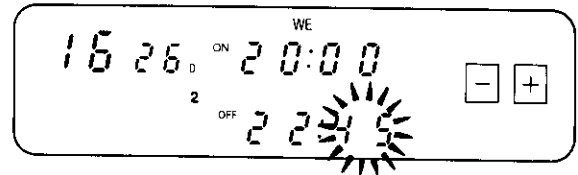
- 10 Press the (+) or (-) Button to select the hour of the end time of the TV programme.



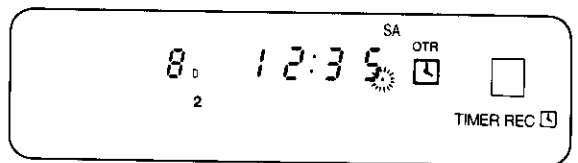
- 11 Press the Next Button.



- 12 Press the (+) or (-) Button to select the minute of the end time of the TV programme.



- 13 Press the Timer Record Button.



For Everyday Recording

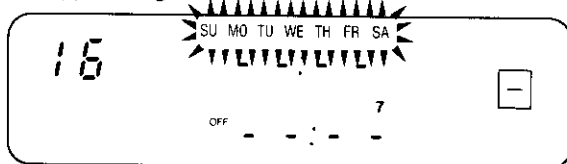
For example:

Programme time for timer recording every day from 20:00–22:45 on timer programme number 7.

Programming for everyday recording can be made on any of the timer programme numbers 1–7.

Execute the operation steps ① to ③ as described on page 19.

- ④ Press the (–) Button once, so that all day indications will appear together.



When programming an everyday recording with the Remote Controller, press the **[16/0]** key twice to make all day indications appear together.

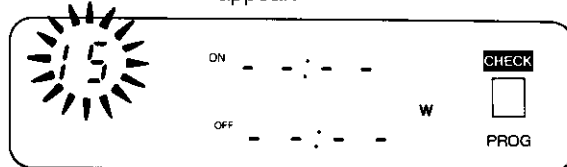
Perform the operation steps ⑤ to ⑬ described on page 20.

For Everyweek Recording

For Example:

Programming a timer recording for a TV programme that is broadcast every week on Sunday, from 20:00 to 22:45.

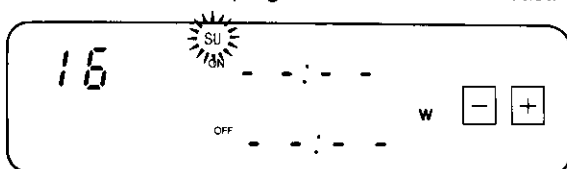
- ① Press the Check/Programme Button 8 times, so that "W" indication will appear.



- ② Press the (+) or (–) Button to select the programme position (channel) on which the TV programme will be broadcast.

- ③ Press the Next Button.

- ④ Press the (+) or (–) Button to select the day of the week, on which the programme will be broadcast.



When programming an everyweek recording with the Remote Controller, press any of 7 keys (**[1 SU]** ~ **[7 SA]**) to select the day of the week.

Perform the operation steps ⑤ to ⑬ described on page 20.

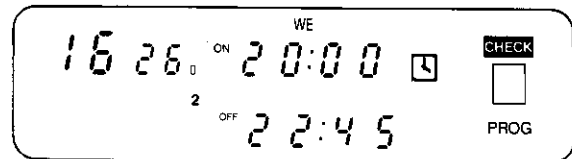
To Confirm the Programme of a Timer Recording

Make sure that the VTR is turned on.

Make sure that the Timer Record Button is set to "On".

Select the programme number to be checked, by repeatedly pressing the Check/Programme Button.

The preset channel and start and ending times of the timer recording will be indicated for about 8 seconds.



To Cancel a Timer Recording

Make sure that:

the VTR is turned on,

the "Timer Record" button is set to "Off".

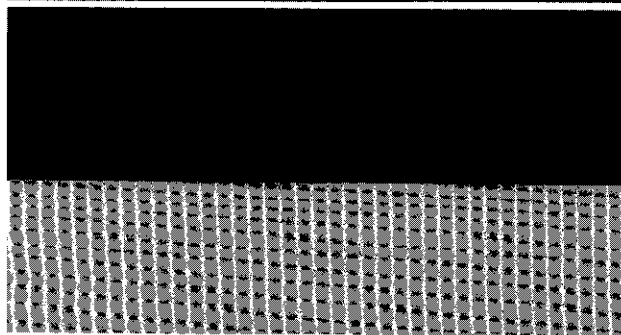
- ① Press the Check/Programme Button repeatedly, until the number of the timer programme that you want to cancel is displayed.

- ② Press the (+) and (–) Button simultaneously for more than 3 seconds.

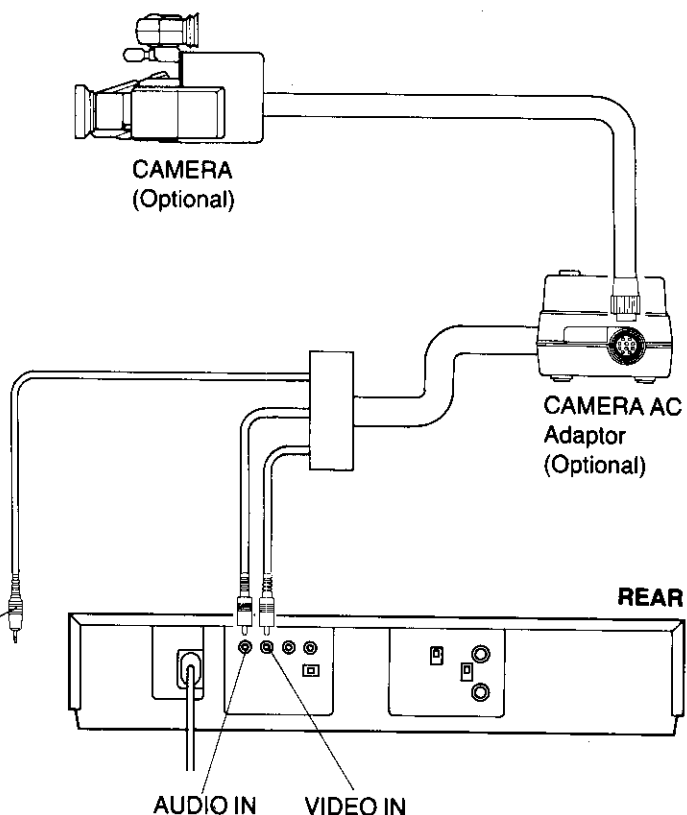
- It is not possible to cancel a programmed timer recording with the Remote Controller.

- It is impossible to confirm programmes of timer recordings while an OTR is being performed.
- To turn the VTR on and use it for playback or recording before the timer recording is performed, set the Timer Record Button to "Off".
- When the Timer Record Button is set to "On" but no video cassette is inserted or no timer recording has been programmed, the Timer Recording Indicator  will flash to inform that the timer recording cannot be performed.
- After the programmed timer recording has been made, set the Timer Record Button to "Off", otherwise the VTR cannot be operated normally.
- During recording, the programme position (channel) on the VTR cannot be changed.
- When you want to watch TV after setting a timer recording, select the desired channel on the TV set.
- To cancel a timer recording during recording, set the Timer Record Button to "Off".

CAMERA RECORDING



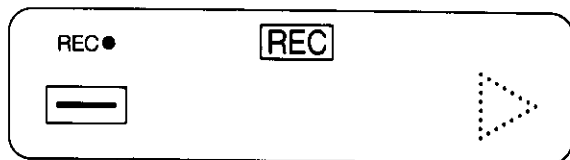
Remote Control Plug:
No Connection



Preparation

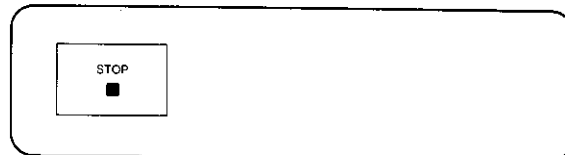
- Connect the Video Camera via the Camera AC Adaptor to the VTR as shown in the illustration above.
- Insert a video cassette with erasure prevention tab intact. When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Set the Tape Speed Selector to "SP" or "LP".
- Set the VTR/TV Selector to "VTR".

- 1 Turn the Camera AC Adaptor on and make the necessary adjustments on the camera. Refer to the operating instructions of the camera you are using.
- 2 Press the Record Button (●) on the VTR to start recording.



Avoid recording unwanted material:
Press the Pause/Still Button (||) of the VTR, and the recording will stop temporarily. To restart recording, press the Pause/Still Button (||), again.

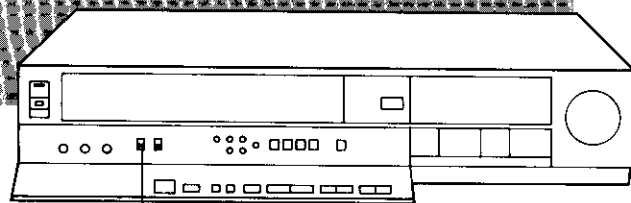
- 3 Press the Stop Button (■) on the VTR to stop the recording.



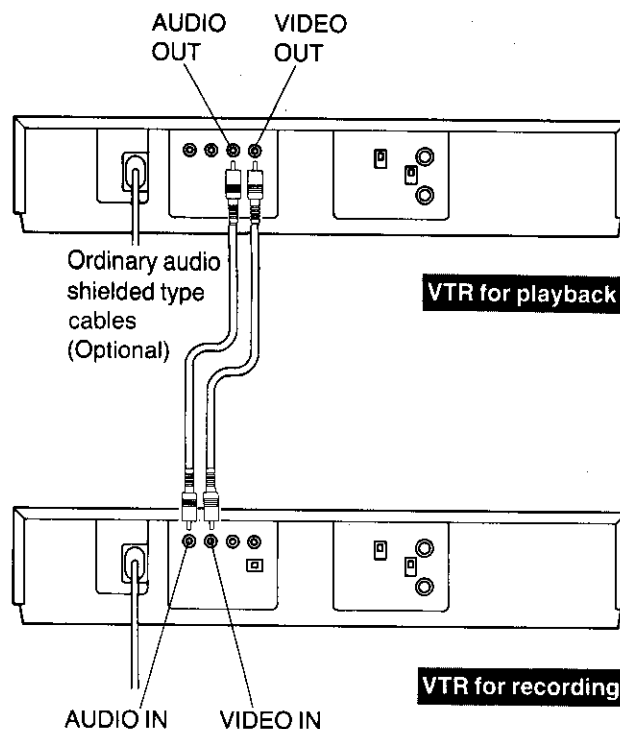
- If you leave the VTR in the pause mode for more than 5 minutes, the VTR will stop automatically to protect the tape and the video heads.
- Even if the video camera is equipped with video recorder remote control functions, this VTR can not be remote-controlled from the camera.
- Disconnect all cables from the VIDEO Input and Audio Input Sockets after finishing camera recording. If they remain connected, it is impossible to record TV programmes.

DUBBING (COPYING)

Dubbing (copying) from one video cassette to another.



EDIT

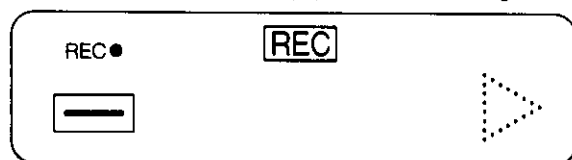


Preparation

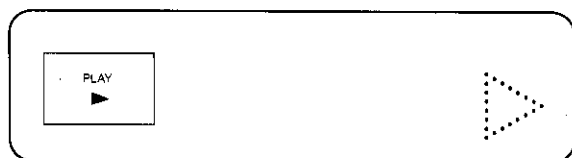
- Press the VTR On/Off Switches to turn both VTRs On.
- Make the connection between the two VTRs as shown above.
- Make sure that the Edit Switches of both the recording and playback VTRs (if equipped) are in the "On" position. Set these switches to "Off" for ordinary use of the VTRs.

1 Place the recorded cassette in the playback VTR and a blank video cassette with the erasure prevention tab intact in the recording VTR.

2 Press the Record Button (●) on the recording VTR.



3 Press the Play Button (▶) on the playback VTR.



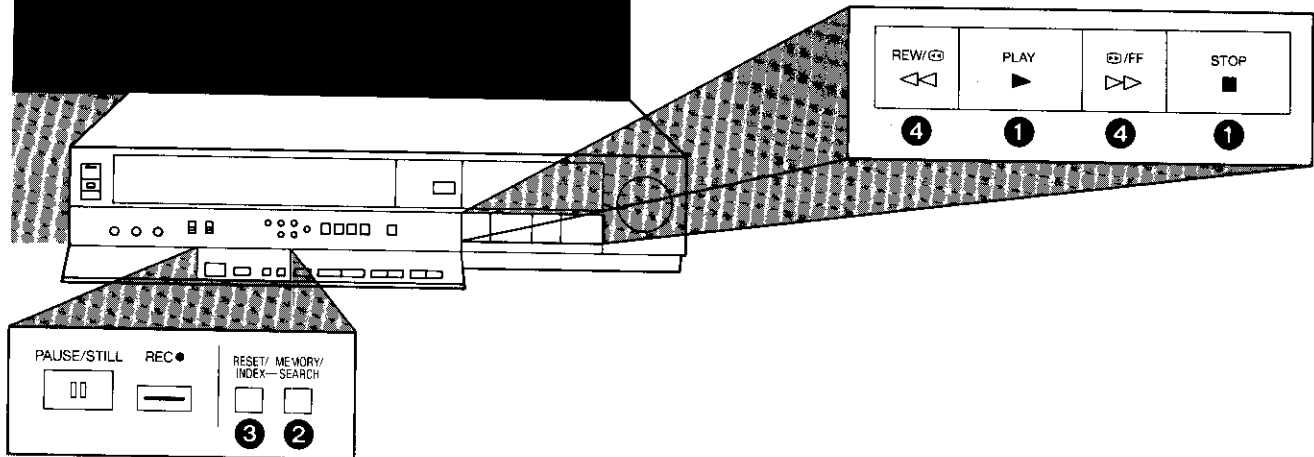
4 Press the Stop Button (■) on both VTRs to stop the dubbing.



- To assure smooth, noiseless cuts when interrupting the recording, always use the Pause/Still Button (||).
- To obtain smooth cuts when starting the recording from the stop mode:
 1. Play back the last part of the previously recorded material to confirm its ending point, and then press the Pause/Still Button (||).
 2. Press the Record Button (●).
(The VTR is still in the pause mode.)
 3. To start recording, press the Pause/Still Button (||) again.
- The picture quality of a re-recorded tape is not as good as that of the original.
- Ensure all cables from the Video Input and Audio Input sockets are disconnected after finishing the recording. If they remain connected, it is impossible to record TV programmes.

VHS INDEX SEARCH SYSTEM

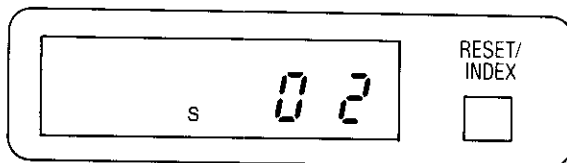
With the Index Search function, up to 20 addresses (places where an index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.



A special index signal (for use of the VHS Index Search function) is automatically recorded every time the Record Button is pressed. If you want to record an additional index signal during the recording of a programme, press the Record Button again at the desired point.

- 1 Press the Play Button (▶) or Stop Button (■).
- 2 Press the Memory/Search Button twice.
 - The indication "S" appears on the Multi-Function Display.
- 3 Repeatedly press the Reset/Index Button to select the desired address.

The number of the selected address is shown on the Multi-Function Display.

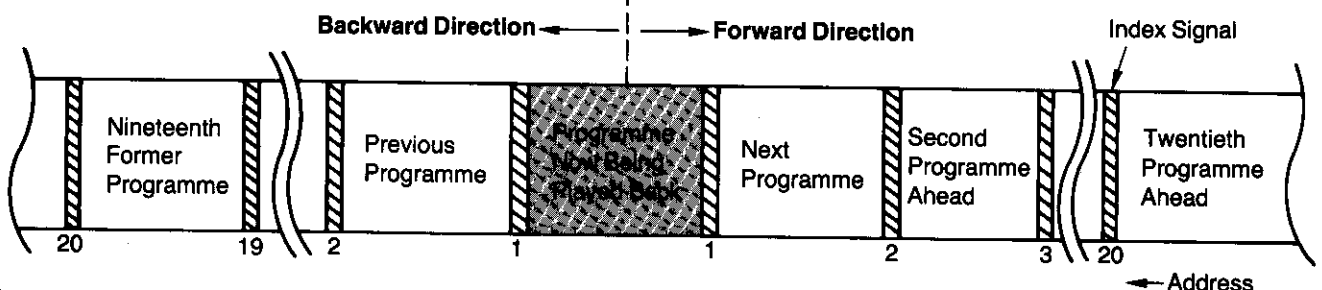


- 4 Press the Rewind ◀◀/Review ◀◀ or Fast Forward ▶▶/Cue ▶▶ Button to start the VHS Index Search function.

- Every time an index signal (address) is skipped the number in the Address Indication decreases by one.
- When the preset address is reached, the Tape Counter Indication will appear in place of the Address Indication, and the normal playback will start.
- To abort the Index Search function midway, press the Play or the Stop Button.

- If the recording is stopped temporarily by pressing the Pause Button and is later resumed, no index signal will be recorded at that position.
- It is impossible to record only index signals onto a tape that has already been recorded.
- If a tape position without any recording is passed during the Index Search function, that position may be counted as an address.
- The Index Search function can only count the addresses correctly, if the index signals are spaced at least 2 minutes in the SP mode and 5 minutes in the LP mode.
- If the Index Search function is started extremely close to the beginning of the next programme (address) or from the beginning of the tape, the first address may not be counted.

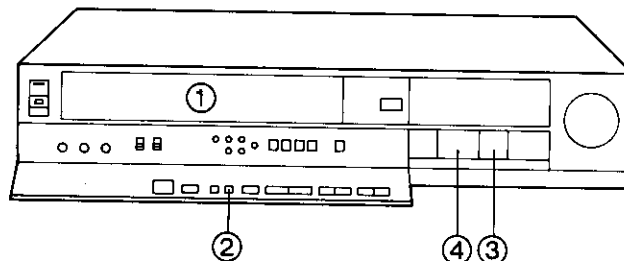
How to Count the Addresses



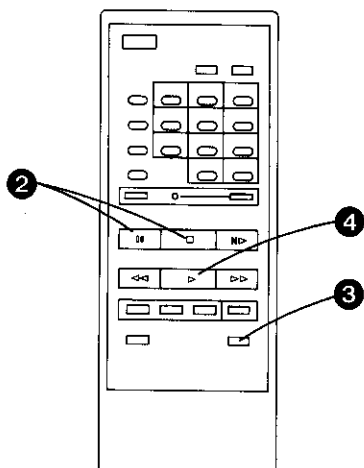
INTRO SCAN FUNCTION

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another. This is convenient for quick checking what programmes are on a tape, or to find the desired instalment of a TV series you have recorded on a tape.

Intro Scan Operation on the VTR



Convenient Intro Scan Operation with the Remote Controller

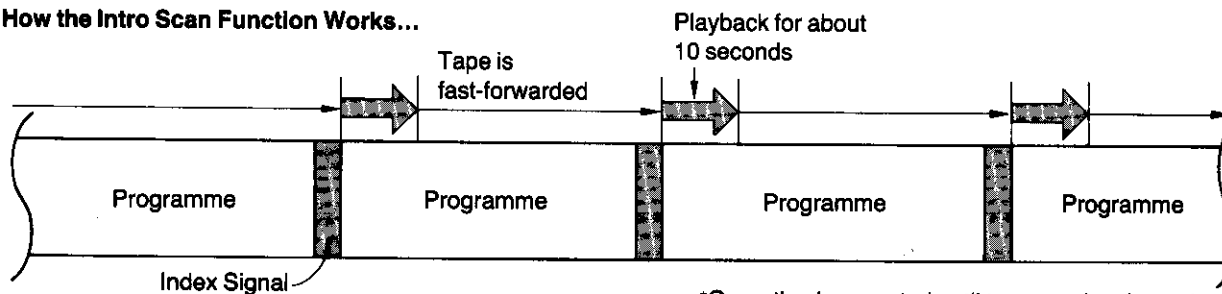


- ① Insert a video cassette on which index signals are recorded.
- ② Put the VTR in the stop mode or the still playback mode.
- ③ Press the Intro Scan Button.
("S" mark will light up in the Multi-Function Display and the Intro Scan will start.)
- ④ When the desired scene is reached, press the Play Button.

- ① Insert a video cassette.
(Put the VTR in the stop mode.)
- ② Press the Memory/Search Button twice.
("S" mark appears.)
- ③ Press the Fast Forward ►►/Cue ►► Button.
(The Intro Scan starts.)
- ④ When the desired scene is reached, press the Play Button.

- The Intro Scan function may not be activated for the first programme recorded close to the beginning of the tape.
- During the Intro Scan, if there is a portion without any recording on the tape, the Intro Scan function will be activated at that position to play back the tape for about 10 seconds, and the Intro Scan will then continue.
- The Intro Scan function may not be activated, if the interval between programme starts is less than 5 minutes in the LP mode, or less than 2 minutes in the SP mode.
- If a portion without any recording on the tape continues for more than about 50 minutes in the SP mode, or more than about 90 minutes in the LP mode, the Intro Scan function will be cancelled and the playback will start.

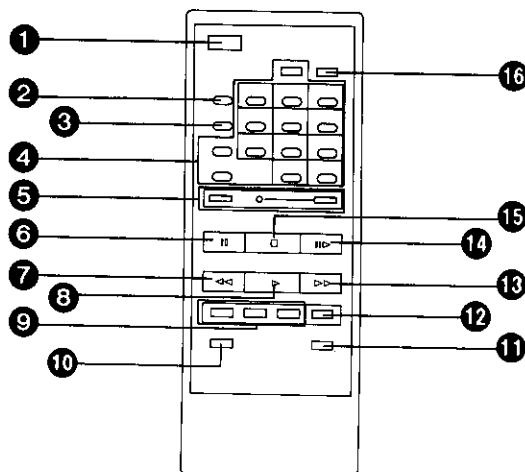
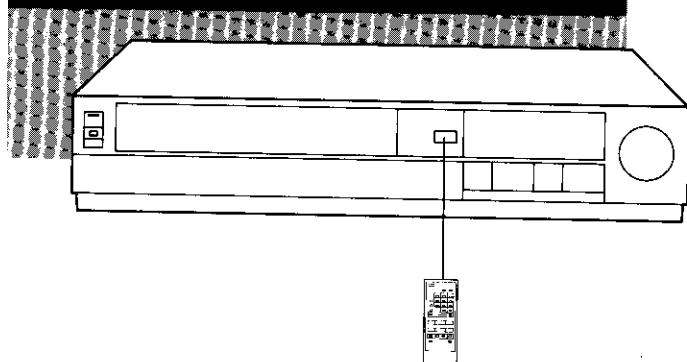
How the Intro Scan Function Works...



*Operation is repeated until tape reaches its end.

PROGRAMMABLE REMOTE CONTROLLER (INFRA-RED)

Part Number: VEQ0570



- ① VTR On/Off Button
- ② Memory/Search Button
- ③ Reset/Index Button
- ④ Timer Recording & Programme Position Selector Buttons

The programming of timer recordings is possible by using these Timer Recording & Programme Position Selector Buttons. For details about the operation, refer to "Timer Recording" on page 19.

- ⑤ Record Buttons (●)
To start recording, press the both buttons simultaneously.
- ⑥ Pause/Still Button (||)
- ⑦ Rewind ◀◀/Review ◀◀ Button
- ⑧ Play Button (▶)
- ⑨ Slow Button
- ⑩ Reverse Play Button
- ⑪ Intro Scan Button
- ⑫ Double Speed Playback Button (×2)
- ⑬ Fast Forward ▶▶/Cue ▶▶ Button
- ⑭ Still Advance Button (||▶)
- ⑮ Stop Button (■)
- ⑯ VTR/TV Selector

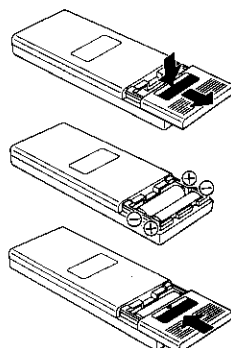
Power Source for the Remote Controller

- The Remote Controller is powered by two IEC "R6" size batteries. The life of the batteries is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the batteries once a year.

CAUTION FOR BATTERY REPLACEMENT

- Load the new batteries with their polarities (⊕ and ⊖) aligned correctly.
- Do not apply heat to batteries, or internal short-circuit may occur.
- If you do not intend to use the Remote Controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new batteries together. (Also never use an alkaline battery with a manganese battery.)

Load the batteries as follows:



- ① Remove the battery compartment lid.
- ② Place two batteries in the battery compartment as indicated inside the battery compartment.
- ③ Replace the lid.

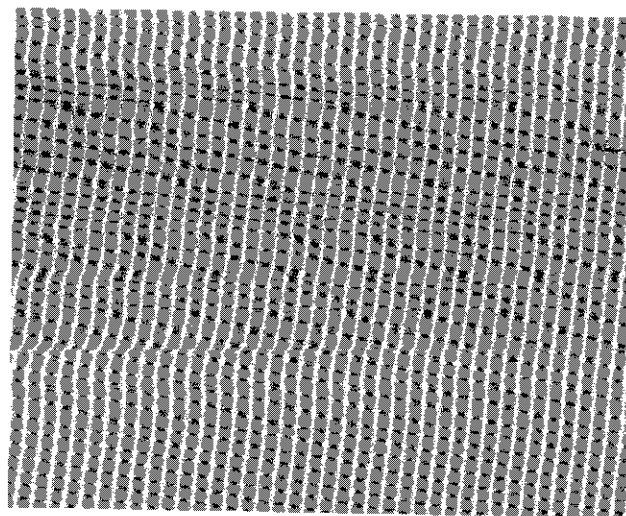
Note:

- The infra-red beam should be transmitted directly at the Remote Control Receiver on the front of the VTR.
- Direct sunlight may interfere with the beam.
- The lightsensing angle of the Remote Control Receiver window in the VTR is about 60°.
- The unit should be used within a range of about 7 meters from the front of the VTR.

BEFORE REQUESTING SERVICE

Before requesting service, check the following points once again.

SYMPTOM	CAUSE	REMEDY
Power doesn't turn on.	Mains lead is not connected.	Connect mains lead to mains outlet.
	The Timer Record button is set to "On".	Set the Timer Record button to "Off".
Power is on but unit doesn't operate.	Dew condensation inside the VTR.	Wait until the Dew Indicator "d" goes off.
	Safety devices are operating.	Turn off the VTR On/Off Switch, disconnect mains cord from outlet, then reconnect mains cord to mains outlet and turn on the VTR On/Off Switch again.
TV programmes cannot be recorded.	Connection of aerial lead is not correct.	Connect aerial lead correctly.
	Reception channel is not properly tuned.	Tune reception channel.
	Cables are connected to the Video Input and Audio Input Sockets.	Disconnect all cables from the Video Input and Audio Input Sockets.
OTR Function (One-Touch Timer Recording) cannot be performed.	Clock is flashing "0:00".	Set clock to present time.
Unattended timer recording cannot be performed.	Recording start or recording stop time setting is incorrect.	Set recording start and recording stop time correctly.
	The Timer Record button is set to "Off".	Set the Timer Record button to "On".
	Clock shows incorrect time.	Adjust clock to present time.
	Clock is flashing at "0:00".	Set clock time and perform timer setting.
Unattended timer recording cannot be programmed.	The OTR is now being performed.	Programme the timer recording after the OTR has finished.



SYMPTOM	CAUSE	REMEDY
If you attempt to carry out Recording, Timer Recording, or OTR, the cassette will be automatically ejected.	Accidental erasure prevention tab on the cassette is broken out.	Cover tab hole with adhesive tape.
Playback picture is not reproduced.	Connection with television set is not correct.	Connect the VTR to the television set correctly.
	TV set is not tuned to the video playback channel.	Tune TV set to the video playback channel of the VTR.
Playback picture is not in colour. Playback picture has large amounts of "snow".	Reception channel was not adjusted correctly during recording.	Readjust reception channel correctly.
	TV set is not properly tuned to the video playback channel of the VTR.	Properly tune the TV set to the video playback channel of the VTR.
	The video heads are clogged with dirt.	Consult qualified service personnel.
	The video heads are abraded.	Consult qualified service personnel.
	Tape is old and/or defective.	Use new tape.
Remote Controller does not work.	Remote Controller is not being pointed at Receiver Window on the VTR.	Point the Remote Controller at Receiver Window on the VTR.
	Distance is too far.	Use the Remote Controller within 7 m from the VTR.
	An obstacle is between Remote Controller and VTR.	Remove obstacle.
	Batteries are exhausted.	Replace batteries.
	Battery polarities (+, -) are reversed.	Insert batteries correctly.

CAUTIONS

Please read these cautions before you operate this VTR.

Avoid Sudden Changes in Temperature

If the VTR is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the VTR. In this case, the Dew Indicator "d" will flash on and off and the VTR will not operate.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VTR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.

No Fingers or Other Objects Inside

Touching internal parts of this VTR is dangerous, and may cause serious damage to the VTR. Do not attempt to disassemble the VTR. There are no user serviceable parts inside.

Keep Water away

Keep the VTR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, consult qualified service personnel.

Cleaning the VTR

Wipe the VTR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VTR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads are the means by which the recorder places picture signals on the tape during recording, and reads picture signals from the tape during playback. If these heads become dirty and clogged from long use, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs have the recorder checked by qualified service personnel.

If Dew Condensation Forms in the VTR

Condensation may form in the VTR if:

- The VTR is in a room where the heater has just been turned on.
- The VTR is in a room with steam or high humidity.
- The VTR is brought from cold surroundings into a well-heated room.
- The VTR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

When dew forms in the VTR: (Refer to page 5)

The Dew Indicator "d" on the Multi-Function Display will flash on and off and all the function buttons are made non-operational to protect the tape and the video heads.

When the Dew Indicator flashes, wait until this indicator disappears.

- If dew condensation forms inside the VTR while the VTR On/Off Switch is off, it will turn on automatically and the Dew Indicator will flash on and off. As soon as the dew condensation has been dissolved, the VTR will turn itself off again.

SPECIFICATIONS

NV-G25A, EA

Power Source:	NV-G25A: 240 V AC 50-60 Hz NV-G25EA: 230 V AC 50-60 Hz
Power Consumption:	Approx. 25 watts

Video Recording System:	2 rotary heads, helical scanning system
Tape Speed:	SP: 23.39 mm/sec. LP: 11.695 mm/sec.
Tape Format:	VHS tape
Record/Playback Time:	SP: 240 min. with NV-E240 LP: 480 min. with NV-E240
FF/REW Time:	Less than 5.5 min. with NV-E180

VIDEO

Television System:	CCIR: 625 lines, 50 fields, PAL colour signal
Modulation System:	Luminance: FM azimuth recording Colour signal: converted subcarrier phase shift recording
Input Level:	VIDEO IN (PHONO); 1.0 Vp-p, 75 ohm, unbalanced
Output Level:	VIDEO OUT (PHONO); 1.0 Vp-p, 75 ohm, unbalanced RF Modulated; NV-G25A: VHF channel 0 or 1, 75 ohm, unbalanced NV-G25EA: VHF channel 2 or 3, 75 ohm, unbalanced

AUDIO

Input Level:	AUDIO IN (PHONO); -10 dB, more than 50 kohm, unbalanced
Output Level:	AUDIO OUT (PHONO); -8 dB, less than 1 kohm, unbalanced
Audio Track:	1 track monaural
Video Horizontal Resolution:	Colour; more than 240 lines (SP)
Signal-to-Noise Ratio:	Video; more than 43 dB (SP) Audio; more than 43 dB (SP)
Audio Frequency Response:	80 Hz-10 kHz (SP)
Operating Temperature:	5°C-40°C
Operating Humidity:	35%-80%
Weight:	5.5 kg
Dimensions:	430 (W)×82 (H)×360 (D) mm
Standard Accessories:	1 pc. DIN-DIN coaxial cable 1 pc. Programmable Remote Controller (Infra-red) 1 pc. AC Mains Lead 1 pc. Digital Scanner

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.



A series of horizontal lines for writing, spanning the width of the page. There are 15 lines in total, starting from the top margin and ending just above the large rectangular box at the bottom of the page.



A large rectangular box for drawing or additional notes, occupying the bottom half of the page. It is defined by a solid black border.

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F0387M1057-5000 ⑧

